

CLAIMS

1) An assembly system for assembling an internal combustion engine fuel injector comprising a hollow body
5 (6) supporting an injection nozzle; said hollow body (6) housing a metering valve (8) for metering the fuel to be injected by said nozzle, and comprising a support (17) housing an electromagnet (18) controlling said metering valve (8); and said support (17) being fitted to said
10 hollow body (6); characterized in that said support (17) is connected removably to said hollow body (6) by click-on means (38).

2) An assembly system as claimed in Claim 1, characterized in that said click-on means comprise a leaf
15 spring (38) engaging said support (17); said leaf spring (38) comprising at least one hook-shaped appendix (42) which clicks on to a corresponding retaining element (46) on said hollow body (6).

3) An assembly system as claimed in Claim 2, wherein
20 said hollow body (6) comprises a cylindrical cavity (25), and said support (17) comprises a sleeve (24) which is inserted in fluidtight manner inside said cylindrical cavity (25); characterized in that said leaf spring (38) comprises a number of elastic blades (41), each having a
25 hook-shaped appendix (42); said hollow body (6) comprising a corresponding number of shoulders (46) on to which said hook-shaped appendixes (42) click.

4) An assembly system as claimed in Claim 3,

characterized in that each of said elastic blades (41) comprises a straight portion (45) parallel to the axis of said cylindrical cavity (25); each of said shoulders (46) being located at a depression (47) in the lateral wall of said hollow body (6).

5 5) An assembly system as claimed in Claim 4, characterized in that said elastic blades (41) are two in number and located diametrically opposite with respect to said hollow body (6).

10 6) An assembly system as claimed in Claim 4, wherein said support (17) also comprises an end wall (29) having a fuel discharge conduit (31) of said metering valve (8); characterized in that said leaf spring (38) comprises a central flat portion (39) lying in a plane perpendicular to said straight portions (45) of said elastic blades (41); said flat portion (39) engaging said end wall (29).

15 7) An assembly system as claimed in Claim 6, characterized in that said flat portion has an opening (40) in which said discharge conduit (31) is inserted.

20 8) An assembly system as claimed in Claim 7, characterized in that said flat portion (39) is ring-shaped, and said opening (40) is circular; said elastic blades (41) being formed in one piece with and located radially with respect to said flat portion (39).

25 9) An assembly system as claimed in Claim 7, characterized in that the straight portion (45) of each of said elastic blades (41) is connected to said flat portion (39) by a curved portion (44) forming a bend

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projecting from said flat portion (39) in the opposite direction to said straight portion (45); said curved portion (44) being engaged manually to click on said hook-shaped appendix.

- 5 10) An assembly system as claimed in Claim 4, characterized in that each of said hook-shaped appendixes (42) comprises an inclined portion (48) which engages the outer surface of said hollow body (6) to flex outwards the corresponding elastic blade (41) of said leaf spring
10 (38).

 11) An assembly system as claimed in Claim 8, characterized in that each of said shoulders (46) is defined by an underside recess surface in the outer surface of said hollow body (6).

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